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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,753	02/09/2004	Ac Kwon Yoo	1768-51-3 / 10214.12014/U	6132
996 7590 07/05/2007 GRAYBEAL, JACKSON, HALEY LLP 155 - 108TH AVENUE NE SUITE 350 BELLEVUE, WA 98004-5973			EXAMINER HOOK, JAMES F	
			ART UNIT 3754	PAPER NUMBER
			MAIL DATE 07/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/774,753	Applicant(s) YOO ET AL.	
	Examiner James F. Hook	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152..

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2-9-04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

The examiner notes that in claim 2, line 10 of the claim, the word "brining" appears to be misspelled and should appear as "bringing", if such is the case, it is requested that applicant correct the spelling in any subsequent response to this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood (063). The patent to Wood discloses the recited method of repairing and reinforcing an underground pipe comprising inserting a mold made of flexible material through the interior of a reinforcing element 12 of a fiber perform surrounded by an impermeable inner and outer layers 16,26 where the inner mold is combined with the reinforcing element, positioning the combined element which includes the reinforcing element and the inner mold into an underground pipe to be repaired 70, injecting and expanding the inner mold with a high temperature fluid to bring the reinforcing element into close contact with an inner wall of the underground pipe, injecting the reinforcing element with thermosetting resin, and where the inner mold 26 after inversion can be removed, where air or water can be used to expand the mold, the fibrous sheet material

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can be felt, woven, knitted or rovings of glass or various synthetic fibers, the resin used can be polyester or epoxy, where the epoxy can be injected by puncturing a tube into the sealed mold, where a plurality of sleeves can be used which would require a repeating of the injecting and expanding procedure after the first to create a multiple lined pipe section.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (063) in view of Catallo. The patent to Wood discloses all of the recited structure with the exception of providing a tube punctured into the mold to allow for the escape of air. The patent to Catallo discloses that it is old and well known in the art to provide a pipe with openings 18 through a tube 12 which is inserted into the space between inner and outer liner sheets to allow the removal of air from a felt material to insure the connection of the felt liner to the pipe it is being used to repair. It would have been obvious to one skilled in the art to provide the mold in Wood with a vent tube for allowing the removal of air during the addition of resin to the felt material to insure a proper complete impregnating of the felt material as suggested by Catallo to prevent premature failure of the liner thereby saving money in repair costs.

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Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (063). The patent to Wood discloses all of the recited structure with the exception of rolling the reinforcing element and mold before insertion rather than the stacking method used in Wood. It is considered merely a choice of mechanical expedients to provide the liner to the place to be lined in any manner including rolling the liner where such is merely a choice of mechanical expedients and one skilled in the art would only require routine experimentation to arrive at an optimum way to provide the liner to the job site where such is a mere equivalent way to provide the liner in a compact manner, where rolling or folding are considered equivalent and only routine skill is required to decide between the two methods, where rolling would prevent creases that the folding step would provide to the liner thereby causing weak spots that may fail.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon in view of Catalla. The patent to Lyon discloses the recited method of repairing and reinforcing an underground pipe comprising inserting a mold made of flexible material through the interior of a reinforcing element 18 of a fiber perform surrounded by an impermeable inner and outer layers 16,14 where the inner mold is combined with the reinforcing element, positioning the combined element which includes the reinforcing element and the inner mold into an underground pipe to be repaired 12, expanding the inner mold with air to bring the reinforcing element into close contact with an inner wall of the underground pipe, injecting the reinforcing element with thermosetting resin via pipes 40,42 provided between the mold layers, where air can be used to expand the mold, where the liner is provided in a U shape into the pipe. The patent to Lyon

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discloses all of the recited structure with the exception of providing a tube punctured into the mold to allow for the escape of air. The patent to Catallo discloses that it is old and well known in the art to provide a pipe with openings 18 through a tube 12 which is inserted into the space between inner and outer liner sheets to allow the removal of air from a felt material to insure the connection of the felt liner to the pipe it is being used to repair. It would have been obvious to one skilled in the art to provide the mold in Lyon with a vent tube for allowing the removal of air during the addition of resin to the felt material to insure a proper complete impregnating of the felt material as suggested by Catallo to prevent premature failure of the liner thereby saving money in repair costs.

Claims 2, 3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon in view of Wood (063). The patent to Lyon discloses all of the recited structure with the exception of removing the inner liner, providing a second lining step, and rolling the liner. It is considered merely a choice of mechanical expedients to provide the liner to the place to be lined in any manner including rolling the liner where such is merely a choice of mechanical expedients and one skilled in the art would only require routine experimentation to arrive at an optimum way to provide the liner to the job site where such is a mere equivalent way to provide the liner in a compact manner, where rolling or folding are considered equivalent and only routine skill is required to decide between the two methods, where rolling would prevent creases that the folding step would provide to the liner thereby causing weak spots that may fail. It would have been obvious to modify the method in Lyon by providing the steps of removing a portion of the mold and providing a second lining step as suggested by Wood as such would

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provide two liners in sections that require a thicker liner to prevent premature wear and where it is an equivalent procedure to either leave the mold in tact or remove a portion of it where such is an equivalent manner to line a pipe.

Claims 4, 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon in view of Wood (063) as applied to claims 2, 3, and 7 above, and further in view of Catalla. The patent to Lyon as modified discloses all of the recited structure with the exception of providing a tube punctured into the mold to allow for the escape of air. The patent to Catallo discloses that it is old and well known in the art to provide a pipe with openings 18 through a tube 12 which is inserted into the space between inner and outer liner sheets to allow the removal of air from a felt material to insure the connection of the felt liner to the pipe it is being used to repair. It would have been obvious to one skilled in the art to provide the mold in Lyon as modified with a vent tube for allowing the removal of air during the addition of resin to the felt material to insure a proper complete impregnating of the felt material as suggested by Catallo to prevent premature failure of the liner thereby saving money in repair costs.

Conclusion

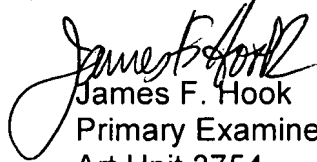
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references to Hall, Masaaki, Wood (553), Stephens (967 and 378), Endoh, Kiest, Jr. (619 and 280), and Manners disclosing state of the art lining methods for pipes.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


James F. Hook
Primary Examiner
Art Unit 3754

JFH